Disciplinary Literacy in North Dakota Content Standards

Literacy and text are specialized across the disciplines. Each discipline has a unique way of using text to create, disseminate, and evaluate knowledge. Strategies employed by learners as they encounter disciplinary texts come from the demands of the text and the purpose of the specific discipline.

The information below identifies some of the strategies for disciplinary literacy in various disciplines and aspects of the specific content standards within that discipline that refer to those strategies.

Computer Science and Cybersecurity

Disciplinary Literacy in Computer Science and Cybersecurity focuses on the following:

Reading	Writing	Thinking
- Evaluate the reliability of content from different websites, authors, and sources. - Exchange ideas within and across communities. - Read and use technical manuals and information about innovative practices in technology. - Understand the meaning of technical vocabulary. - Collect, organize, and analyze data.	- Create and communicate content using a variety of digital media options. - Determine the most effective way to convey content. - Represent ideas symbolically (e.g., color, sound, images) to communicate. - Collect and represent data. - Create algorithms to reflect daily life processes. - Apply technical vocabulary in writing.	- Identify strengths and weaknesses of digital platforms for conveying information. - Apply knowledge about appropriate and safe online behavior. - Develop fluency with the features of digital technology used. - Collaborate with others to exchange ideas and create a product. - Edit work and seek feedback about clarity, message, and impact. - Evaluate the impact of online usage on digital identity. - Find technical solutions to problems.

The North Dakota Computer Science and Cybersecurity Content Standards provide opportunities to address disciplinary literacy within the following concepts:

- **Computing Devices and Systems**: This concept provides opportunities to embed disciplinary literacy as learners develop an understanding of how networks, hardware, and software function and interact, fostering adaptable skills for digital environments.
- **Algorithms and Computational Thinking**: This concept provides opportunities to embed disciplinary literacy as learners develop and apply a basic understanding of algorithms and computational thinking, enhancing problem-solving and critical-thinking skills.
- **Impacts of Computing**: This concept provides opportunities to embed disciplinary literacy as learners understand how technology shapes individuals and the world and influences safety policy, law, and ethics.
- **Digital Citizenship**: This concept provides opportunities to embed disciplinary literacy as learners practice responsible digital consumption, creation, communication, and interaction.
- **Security**: This concept provides opportunities to embed disciplinary literacy as learners gain a foundational understanding of safe and best practices for data and system security, including information, network, and physical security.

References

Lent, Releah. (2017, February) *Disciplinary Literacy: A Shift that Makes Sense*. ASCD Express. ASCD.

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